SOME PLANTS OF THE ZOR HILLS, KOWEIT, ARABIA

HUMPHREY G. CARTER

582.09353
CAR
8131

SOME PLANTS OF THE ZOR HILLS, KOWEIT, ARABIA

BY

HUMPHREY G. CARTER, M.B., Ch.B.

Economic Botanist to the Botanical Survey of India.

BISHEN SINGH MAHENDRA PAL SINGH

23-A, New Connaught Place

DEHRA DUN-248001, INDIA

1978

RECORDS
OF THE
BOTANICAL SURVEY OF INDIA

VOLUME VI.—No. 6

SOME PLANTS OF THE ZOR HILLS, KOWEIT, ARABIA,

BY
HUMPHREY G. CARTER, M.B., Ch.B.
Economic Botanist to the Botanical Survey of India.

WITH NOTES BY
SIR P. Z. COX, K.C.S.I., K.C.I.E.,
AND
LIEUTENANT-COLONEL S. G. KNOX, C.I.E.

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1917

Agents for the Sale of Books Published by the Superintendent of Government Printing, India, Calcutta.

IN EUROPE.

Constable & Co., 10, Orange Street, Leicester Square, London, W.C.

Kegan Paul, Trench, Trübner & Co., 68-74, Carter Lane, E.C., and 25, Museum Street, London, W.C.

Bernard Quaritch, 11, Grafton Street, New Bond Street, London, W.

P. S. King & Sons, 2 & 4, Great Smith Street, Westminster, London, S.W.

H. S. King & Co., 65, Cornhill, E. C., and 9, Pall Mall, London, W.

Grindlay & Co., 54, Parliament Street, London, S.W.

Luzac & Co., 46, Great Russell Street, London, W.C.

W. Thacker & Co., 2, Creed Lane, London, E.C.

T. Fisher Unwin, Ltd., 1, Adelphi Terrace, London, W.C.

B. H. Blackwell, 50 & 51, Broad Street, Oxford.

Deighton Bell & Co., Ltd., Cambridge.

Oliver and Boyd, Tweeddale Court, Edinburgh.

E. Ponsonby, Ltd., 116, Grafton Street, Dublin.

Ernest Leroux, 28, Rue Bonaparte, Paris.

Martinus Nijhoff, The Hague, Holland.

IN INDIA AND CEYLON.

Thacker, Spink & Co., Calcutta and Simla.

Newman & Co., Calcutta.

R. Cambray & Co., Calcutta.

S. K. Lahiri & Co., Calcutta.

B. Banerjee & Co., Calcutta.

The Indian School Supply Depot, 309, Bow Bazar Street, Calcutta, and 226, Nawabpur, Dacca.

Butterworth & Co. (India), Ltd., Calcutta.

Rai M. C. Sarcar Bahadur and Sons, 75-1-1, Harrison Road, Calcutta.

The Weldon Library, 18-5, Chowringhee Road, Calcutta.

Standard Literature Company, Ltd., Calcutta.

Lalchand & Sons, Calcutta.

Higginbotham & Co., Madras.

V. Kalyanarama Iyer & Co., Madras.

G. A. Natesan & Co., Madras.

S. Murthy & Co., Madras.

Thompson & Co., Madras.

Temple & Co., Madras.

P. R. Rama Iyer & Co., Madras.

E. M. Gopala Krishna Kone, Madura.

Thacker & Co., Ltd., Bombay.

A. J. Combridge & Co., Bombay.

D. B. Taraporevala, Sons & Co., Bombay.

Mrs. Radhabai Atmaram Sagoon, Bombay.

Sunder Pandurang, Bombay.

Gopal Narayan & Co., Bombay.

Ram Chandra Govind & Son, Kalbadevi, Bombay.

A. H. Wheeler & Co., Allahabad, Calcutta and Bombay.

N. B. Mathur, Supt., Nazir Kanun Hind Press, Allahabad.

Rai Sahib M. Gulab Singh & Sons, Mufid-i-Am Press, Lahore.

Rama Krishna & Sons, Lahore.

A. Chand & Co., Lahore, Punjab.

Supt., American Baptist Mission Press, Rangoon.

Manager, "The Hitavada", Nagpur.

S. C. Talukdar, Proprietor, Students and Company, Cooch Behar.

A. M. & J. Ferguson, Ceylon.

Manager, Educational Book Depots, Nagpur and Jubbulpore.*

Manager of the Imperial Book Depot, 63, Chandney Chauk Street, Delhi.*

Manager, "The Agra Medical Hall and Co-operative Association, Ltd." (Successors to A. John & Co., Agra.)*

Supt., Basel Mission Book and Tract Depository, Mangalore.*

P. Varadachary & Co., Madras.*

H. Liddell, Printer, etc., 7, South Road, Allahabad.*

D. C. Anand & Sons, Peshawar.*

Ram Dayal Agarwala, 184, Katra, Allahabad.*

Manager, Newal Kishore Press, Lucknow.*

*Agents for the sale of Legislative Department publications only.

INTRODUCTION.

THE plants that form the subject of this paper were collected some ten years ago mainly by Sir Percy Z. Cox, K.C.S.I., K.C.I.E., under the slopes of the Zor Hills on the coast line of the north-east corner of the principality of Koweit on the Persian Gulf. The specimens were sent shortly after they were collected to the Royal Botanic Garden, Calcutta, where they were identified by Captain (now Major) A. T. Gage, I.M.S., and afterwards returned to Sir Percy Cox. In 1915 the collection was returned to the Director of the Botanical Survey by the Foreign and Political Department of the Government of India for preservation in the Herbarium of the Royal Botanic Garden, Calcutta. At the same time the manuscript notes recorded by Sir Percy Cox and by Lieutenant-Colonel S. G. Knox, C.I.E., on the appearance of the plants in the field, their uses, vernacular names and such like were also sent. These notes have been reproduced with as little editing as possible, so that their practical value should not be impaired. The value of Sir Percy Cox's collection is greatly enhanced by his accurate record of Arabic and Persian plant names, which he has written in fully pointed naskh. This forms a welcome contrast to the carelessness with which many collectors record vernacular names. He has also given romanised transcriptions of these names. It may be as well to point out for the benefit of those who have learnt languages in India, that Arabic scholars in transcribing often use different letters from those used in transcriptions from Indian languages such as Urdu. For example ق is often transcribed by 'g,' ض by 'th' etc.

The collection is necessarily not completely representative of the vegetation of the Zor Hills but is nevertheless of much interest. As might be expected from the climatic conditions the specimens show decidedly xerophilous characters. Some of the monocotyledons (*Gagea*) resemble bundles of wire. The species of *Haloxylon* are almost leafless. The Boraginaceae have rosettes of densely hairy leaves. The species of *Filago*, etc., are diminutive and wool-clad. The Cruciferae, which unfortunately comprise many undetermined specimens, show perhaps less xerophily than the others. This may be connected with the faculty possessed by annual cruciferous plants of completing their life history from seed to seed in very short periods. The rain falls, and the seeds germinate. During the few moist days the plants grow up and flower, and before drought again prevails, seed is already set.

A large number of the species included extend into the desert region of India. Some of the species have a wide range, seven of them belonging to the British Flora. These are:—

Cynodon dactylon Pers.
Silene conica L.
Papaver hybridum L.
Erodium cicutarium L.
Anagallis arvensis L.
Plantago coronopus L.
Filago germanica L.

All these plants except *Silene conica* and *Plantago coronopus* also extend into India.

A departure from the practice in previous numbers of the Records of the Botanical Survey has been made in arranging the plants according to Engler's System (Syll. ed vii.)

H. G. C.

ABBREVIATIONS.

D. C. Prod.—Prodomus Systematis Naturalis Regni Vegetabilis.

D. E. P.—Dictionary of the Economic Products of India by George Watt.

E. P.—Die Pflanzenfamilien, by Engler and Prantl.

F. B. I.—Flora of British India, by Sir Joseph Hooker.

Fl. Or. —*Flora* Orientalis, by Edmond Boissier.

Forskål —Flora Aegypto-Arabica, by P. Forskål.

Muschler—Mannual Flora of Egypt, by Dr. Reno Muschler.

SOME PLANTS OF THE ZOR HILLS, KOWEIT, ARABIA

BY

HUMPHREY G. CARTER, M.B., CH. B.,

Economic Botanist to the Botanical Survey of India.

WITH NOTES BY

SIR P. Z. COX, K.C.S.I., K.C.I.E.

AND

LIEUTENANT-COLONEL S. G. KNOX, C.I.E.

EUMYCETES.

FUNGI.

EDIBLE fungi are generally confined to *Basidiomycetes.* Koweit and the surrounding country are said to be full of fungi, many of which are edible and some of which form a regular article of trade in the local bazars. Of these the most important is "faga'ah" (فَقّعه) which is sold in the Koweit bazar in large quantities. There are, however, two kinds of "faga'ah," one soft and crumply which is somewhat suggestive from the description of a *Phellorina* and the other harder and more compact. Another valuable kind is known as "fukaiah" (فُقَيعه) which is largely eaten in Koweit and by the English at Basra as truffles. These are generally to be found in the soils where "ragrōg" (رُقْرُوق) or *Helianthemum Lippii* Pers. grows and they are usually sought for in the mud plots between sandhills wherever this plant is met with. A smaller kind is known as the "birds' faga'ah". There are moreover plenty of the *Agaricaceae*, only one kind of which, picked up near Bunder Shwaik, seems to have come within the knowledge of Sir Percy Cox as good.

EMBRYOPHYTA SIPHONOGAMA.

ANGIOSPERMAE.

MONOCOTYLEDONEAE.

1—GRAMINACEAE.

1. Zea Linn.

1. **Zea Mays** L. Sp. Pl. 971. Not mentioned by Boissier or Muschler; F. B. I. VII, 102.

Local name.—Arab. "dhura" (ذُرة); Pers. "zurat shirbalal" (ذُرتَ شیر بلال): Eng. Maize, Indian Corn. Watt in the Dictionary of Economic Products gives Arabic names as "durah kizan", and "durah shami." Sir Percy Cox observes that the term "dhura" is applied with explanatory suffixes both to *Zea Mays* and to *Sorghum*.

Distrib.—Almost cosmopolitan in the state of cultivation. It may be of recent introduction to the Persian Gulf.

2. Sorghum Pers.

2. **Sorghum vulgare** Pers. Syn. I, 101.

S. annuum Pers. Fl. Or. V, 459.

Andropogon Sorghum Brot. Fl. Lus. I, 88; Fl. Br. Ind. VII, 183. Also see Rendle's Catalogue of Welwitsch's African Plants.

Without locality or number.

Local name.—Arab. "idhra" (اذرة); Pers. "zurat" (ذُرت). According to Sir Percy Cox "dhura" is the general Arabic name for Jowari and also for Maize (see above).* Muschler and Watt both give "dhura" as one of the names for it.

Distrib.—Throughout the warmer parts of Europe, Asia, and Africa, also cultivated in North America.

It is a cultivated cereal, and, according to Boissier, is largely grown in Egypt, Persia and the entire Western Asiatic region. In Egypt Muschler found under cultivation only eight varieties, but in India there are innumerable varieties and forms of this grain in cultivation.

* Arabic ذرة-an atom, particle, hence applied to grains.

3. **Panicum** Linn.

3. Panicum miliaceum L. Sp. Pl. 58. Fl. Or. V, 441; F. B. I. VII, 45.

Oman. Without number.

Local name.—Arab. and Pers. "dukhn" (دُخن) or "sahwi". The Arabic name "dukhn" appears to be generally known. It is quoted by A. DeCandolle in his Origin of Cultivated Plants, by Muschler, and by Watt in his Dictionary of Economic Products.

Distrib.—Syria, Egypt and N. Africa. It is cultivated in many parts of Europe and North Asia and almost throughout India.

4. **Pennisetum** Pers.

4. Pennisetum typhoideum Rich. in Pers. Syn. I, 72; Fl. Or. V, 447; F. B. I. VII, 82.

Without locality or number.

Local name.—Arab. and Pers. "ilm" or "ulm" (اِلم or اُلم). In India it is called "bajri" or "bajra". Muschler calls it "quasak" or "hema".

Distrib.—S. Europe and N. Africa. In India found mostly in cultivation.

5. **Aristida** Linn.

5. ? Aristida sp.
Zor Hills. No. 56.

Local name.—"Nasi" (نَسِي). Muschler gives this name to two species of *Aristida*, viz., *A. plumosa* Linn. and *A. caloptila* Jaub. et Sp.

It is a common tufted grass of the Hazūm lands, growing as a rule on high ground and is collected in large quantities, dried and sold as hay.

6. **Bromus** Linn.

6. Bromus tectorum L. Sp. Pl. 77; Boiss. Fl. Or. V, 647; F. B. I. VII, 359. Zor Hills No. 53.

Local name.—Arab. "zirī'aah" (زريعة).

Distrib.—Western and Northern Asia, Europe and N. Africa. In India it is found in the Western Himalayas. Though common by road-sides, etc., in N. Europe, it does not extend to Britain.

A grass growing like wild oats to about 10 inches or a foot high.

7. **Cynodon** Pers.

7. **Cynodon dactylon** Pers. Syn. I, 85; Boiss. Fl. Or. V, 553; F. B. I. VII, 288.

Without locality or number.

Local name.—"Najam". Muschler gives the name as "negil" while Forskål has it as "nishil".

Distrib.—Throughout all warm countries. Common in India where it is called Dūb or Dūrbā (दूर्वा).

Extends North to Holland and S. W. Britain.

8. **Tetrapogon** Desf.

8. **Tetrapogon villosus** Desf. Fl. Atlant. II, 388; Boiss. Fl. Or. V, 555.

Chloris villosa Pers. Syn. I, 87; F. B. I. VII, 291.

Without locality or number.

Local name.—"Sakhbar".

Distribution.—In the desert regions of Persia westward to Arabia, Egypt and the Canary Islands. In India found in the Punjab and Rajputana.

9. **Triticum** Linn.

9. **Triticum vulgare** Vill. Hist. Pl. Dauph. II, 153; Boiss. Fl. Or. V, 672; F. B. I. VII, 367.

Without locality or number.

Local name.—Arab. "hantah" (حنطه) and Pers. "gandum" (گندم); Eng. Wheat. Watt quotes both names in his Dictionary of Economic Products. The Persian name is very near to the Sanskrit "godhūm" (गोधूम).

Distrib.—Cosmopolitan. In India grown in the more temperate parts.

10. **Hordeum** Linn.

10. **Hordeum vulgare** L. Sp. Pl. 84; Boiss. Fl. Or. V, 686 (excluding sp. *vulgare*); F. B. I. VII, 371.

Without locality or number.

Local name.—Arab. "shayer" (شعير) and Pers. "jau" (جو); Eng. Barley. Watt in his Dictionary of Economic Products gives both these names. Here also the Persian and Sanskrit names are very close "yava" (यव). Cultivated. In India it is grown chiefly in Upper India.

Distrib.—Cosmopolitan.

II—LILIACEÆ.

11. Asphodelus L.

11. Asphodelus tenuifolius Cav. in Anal. Cienc. Nat. III, (1801), 46 ; Fl. Or. V, 314 ; F. B. I. VI, 332.

Asphodelus clavatus Roxb. ex. Hook. f. in F. B. I. l. c.

Zor Hills No. 26.

Local name.—" Barwak " (بروق) Muschler confirms this as the generally accepted name. Forskål gives " buraq ".

Distrib.—Persia westward to Asia Minor and Western Arabia, Egypt and the Canary Islands. In India found in the plains from the Punjab to Bengal.

This plant grows to about 10 inches in height. The flowers have white stripes on a browny pink ground. The leaves bunch up round the stalk and do not trail on the ground. Animals will not graze it. Men use it like No. 95 (see under *Matricaria*) to produce " igt ". Sometimes " Barwak " is used alone and sometimes *Matricaria* and sometimes both mixed together. In the Punjab the seeds of " Barwak " are sometimes used as food, especially during periods of scarcity.

12. Gagea Salisb.

12. Gagea reticulata (Pall.) Schult. Syst. Veg. VII (1829), 552 ; Fl. Or. V, 208 ; F. B. I. VI, 356.

Zor Hills No. 18.

Local name.—" 'Anaisalân " (عنيصلان). Muschler calls it " za'eytemâm ".

Distrib.—From Persia westward to Greece, Turkistan and North Africa. In India it is found in the Punjab plains ascending to the Western Himalayas and the Salt Range.

Common in the plains. It is a low plant about 3 inches high with a rather large, yellow, usually solitary flower. It is somewhat star-shaped and is one of the first to appear in the spring. With the exception of the shape of flower, in general growth and appearance the plant resembles the English field *Crocus*. Men have no use for it and animals do not graze on it so that, in spite of its being so common, few Bedouins can name it.

III—IRIDACEÆ.

13. Iris Linn.

13. Iris Sisyrinchium L. Sp. Pl. I (1753), 59; Fl. Or. V, 120; F. B. I. VI, 272.

Zor Hills No. 74.

Local name.—" Isnainīra " (اسنينيرة). Muschler gives it the names of " onsegl ", " kheyta ", " busseyl " and " zambaq ".

Distrib.—From Persia westward to Asia Minor and the Mediterranean region. Also in Afghanistan and Beluchistan. In India it is found only in the Punjab.

A small plant with orange flowers. Is not known to be of any use. According to Muschler the bulbs are edible.

DICOTYLEDONEÆ.

IV—SALICACEÆ.

14. Populus Linn.

*14. **Populus sp.** probably **P. euphratica** Oliv. Voy. Atlas, III, 449 ; Fl. Or. IV, 1194 ; F. B. I. V., 638.

Without locality or number.

Local name.—Arab. " quāq " (قواق); Pers. " dārsafeda " (دارسفيد). In D. E. P. the term " safeda " is given as the general name for *Populus,* the prefix " dār " meaning a tree. Boissier, however, gives only the name " patta " by which the poplar is known in North-western India, Afghanistan, and Beluchistan.

Distrib.—Westward to Syria and Egypt, also in Central Asia. In India it is found along the Indus Valley and in the Punjab.

15. Salix Linn.

*15. **Salix sp.**

Without locality or number.

Local name.—Arab. " gharab " (غَرَب) ; Pers. " bed " (بيد).

V—POLYGONACEÆ.

16. Rumex Linn.

16. **Rumex lacerus** Balb. in Mem. Acad. Turin. 335 ; Fl. Or. IV, 1017.
R. pictus Forsk. Flor. aeg.-arab LXV, No. 215, 77.
Zor Hills No. 47.

Local name.—" Hambasīs" (حنبصيص). Muschler records it as " hommeyd ".

Distrib.—Asia Minor to Egypt.

This is a wild sorrel with a tiny pink flower, and resembles the English plant. Both animals and men eat it freely. Common.

17. **Rumex vesicarius** Linn. Sp. Pl. 336 ; Fl. Or. IV, 1017 ; F. B. I. V, 61.

Zor Hills No. 26.

Local name.—"Hammaith" (حمّيض). Muschler gives several similar names.

Distrib.—Arabia, Egypt and the Levant. In India it is indigenous in the Western Punjab and the Salt Range; elsewhere cultivated.

The plant grows to about a foot high, and the flowers are reddish green. The leaves, stalks, etc., are succulent with an acid sorrel taste. It is fairly common, growing everywhere except in swamps. Animals graze on it and the Arabs, both Bedouins and townsmen, are very fond of it, eating it both fresh and cooked with meat.

In India it is used as a salad for its acid taste.

17. Calligonum *Linn.*

18. **Calligonum comosum** L'Hérit. in Trans. Linn. Soc. I, 180; Fl. Or. IV, 1,000.

Zor Hills and elsewhere. Without number.

Local name.—"Arta" also called "ghardak" (غردق). Both these names are given by Muschler, the former being the common Arabic name for this species.

Distrib.—Southern Persia, Arabia to Asia Minor and N. Africa.

It is common in the swamps and is grazed by camels.

18. Polygonum Linn.

19. **Polygonum afghanicum** Meissn. in DC. Prod. XIV, 90; Fl. Or. IV, 1041.

Zor Hills No. 43.

Local name.—"Makar" (مكر).

Distrib.—Formerly recorded of Afghanistan only.

A spreading plant with white flowers. Animals graze on it. The Bedouin women dry this plant and use it as a remedy for wounds and snake bite. They have the following saying about it:—

"لو لا المكر ضاع الفكر" or "loola ul makar, zaya ul fikar" meaning "if we had not the 'makar,' we should be at our wits' end."

VI—CHENOPODIACEAE.

19. Kochia Roth.

20. Kochia sp.

Zor Hills No. 75.

Local name.—"Shilwah" (شلوة). Muschler does not give this name.

A thorny little plant lying almost flat on the soil and of no use to men or animals.

20. Arthrocnemum Moq.

*21. **Arthrocnemum glaucum** Ung. Sternb. in Atti. Bot. Congr. Firenz. 1874, 283. (ex. sp. Delile) ; Fl. Or. IV, 932 ; F. B. I. V, 12.

Zor Hills. Without number.

Local name.—"Shinān" (شنان). Muschler corroborates this vernacular name. It is one of the Chenopodiaceous plants commonly included under the generic terms of "rimth" or "hamth" (رمث or حمض).

Distrib.—Western Asia, Arabia and the Mediterranean region. In India it is found in the Deccan Peninsula.

It belongs to the tribe *Salicorneæ* and is, as stated by Boissier, often confused with *Salicornia fruticosa* L.

The plant rises to the height of about 4 feet and its flowers are green. It is found round the "gasar" land in Central Arabia.

21. Schanginia C.A. Mey.

* 22. **Schanginia baccata** (Forsk.) Moq. in DC. Prod. XIII, 119 ; Fl. Or. IV, 944. Engler treats this genus under *Suaeda*.

Zor Hills. Without number.

Local name.—"Tahmah" or "suwwād" (طحمة or سوّاد). Muschler quotes the former name.

Distrib.—Tropical Arabia to Egypt.

It is found chiefly in the swamps and the plant grows to the height of about 4 feet. Its flowers are dark in colour. Grazed by camels.

22. **Salsola** Linn.

* 23. **Salsola tetragona** Del. Fl. Egypt. 203 t. 21, f. 4; Fl. Or. IV, 957.

Boissier has included **Forskål's Salsola tetrandra** as a variety under **S. tetragona** Del. but Engler and Muschler have treated it as synonymous.

Zor Hills. Without number.

Local name.—"'Arād" (عراد). Muschler gives this name.

Distrib.—Asia Minor, Arabia and Egypt.

It is a plant of compact growth reaching to the height of 2 feet. Flowers yellowish. Generally found in Saman and north of Batin.

* 24. **Salsola foetida** Del. Fl. Egypt. Illustr. No. 310; Fl. Or. IV, 961; F. B. I. V, 18.
Zor Hills. Without number.

Local name.—"Kharit" (خريط). Muschler and Boissier both give this name.

Distrib.—From Beluchistan to Arabia, Persia and N. Africa. In India it is found in the Punjab and the Upper Gangetic Plain.

This plant is confined to "hazum" lands (حزوم) but is widespread in its locality. It rises to the height of about 2 feet and its flowers are green.

23. **Haloxylon** Bunge.

25. **Haloxylon salicornicum** Bunge in Boiss. Fl. Or. IV, 949; F. B. I. V, 16.
Oman. Without number.

Local name.—"Ramth" (رمث).
Distrib.—Afghanistan, Beluchistan and Persia.

26. **Haloxylon** sp.

Zor Hills. No. 27.

Local name.—"Rimth" (رمث).

This is the commonest of the many species of the "rimth" or "hamth" plants. It is whitish grey in colour and does not grow to more than 2 feet in height. It is eaten by camels.

27. **Haloxylon recurvum** Boiss. Fl. Or. IV, 949; F. B. I. V, 15.
Zor Hills. Without Number.

Local name.—" Haram " (هَرَم).

Distrib.—Afghanistan and Beluchistan. In India it is found in the Western Punjab Plains, the Salt Range, Sind and in parts of the Deccan.

This is the commonest shrub of the swamps. On this the camels feed, especially when they have got nothing better.

VII—CARYOPHYLLACEÆ.

24. Silene Linn.

28. Silene conica Linn. Sp. Pl. 418; Fl. Or. I, 578.
Zor Hills. No. 81

Local name.—" Tarbah " (تَرْبَة).

Distrib.—Asia Minor, Trans-Caucasia, Southern and Central Europe, Britain and North Africa.

A plant spreading along the ground and not rising above 3 inches. It loves the sand hills and is especially common round Thum Niga, the conspicuous sand hills, east of the Geishang Wells. It has white flowers. No use is known for it.

British specimens are usually about a foot high.

29. Silene tenuis Willd. Enum. Hort. Berol. 474; F. B. I. I, 219.
S. repens Boiss. Fl. Or. I, 614.
Zor Hills. No. 40.

Local name.—" Jaraisah " (جُرَيْسَة).

Distrib.—Armenia to Trans-Caucasia, Northern and Arctic Asia. In India it is found in the North-West Himalayas from Kumaun to Kashmir.

A common little plant about 8 inches high with white flowers. It grows everywhere except in swamps and is of no use or harm to men or animals.

VIII—PAPAVERACEÆ.

25. Papaver Linn.

30. Papaver hybridum Linn. Sp. Pl. 506; Fl. Or. I, 117; F. B. I. I, 117.
Zor Hills. No. 65.

Local name.—" Daidhân " (دَيْدَحَان). Forskål calls it " abun-nom " which Muschler also quotes.

Distrib.—From the Punjab to South and Central Europe, Britain and North Africa.

A small poppy growing to a height of 6 inches, and fairly common in the " hazum " lands (حَزْم) and in open sandy plains. It has flowers purple-black in colour. It is much admired by the Bedouins for its beauty. Grazed on by animals.

IX—CRUCIFERÆ.

26. **Erucaria** Gaertn.

31. ? **Erucaria uncata** Boiss. Diagn. Ser. I, VIII, 47.

Hussonia uncata Boiss. Fl. Or. I, 367.

Zor Hills. No. 16.

Local name.—" Silih " (سليح). Muschler quotes it as " slih " but he gives the same name to *Launea angustifolia* Muschler.

Distrib.—The deserts of North-Eastern Africa.

It grows to a height of 2 feet, bears handsome, mauve flowers and has a purplish stem, and not much leaf. It is common in plains and hills but not in swamps. It resembles "yahak " (يهق)(see *Chorispora* No. 39). The flowers have a fairly strong and sweet scent like but fainter than the scent of heliotrope. Camels are very fond of it. A fine study in contrasts is presented by the sight of a camel's head with a bunch of these handsome flowers protruding from its mouth.

27. **Carrichtera** Adans.

32. Carrichtera vellæ DC. Syst. Veg. II, 642 ; Fl. Or. I, 397.

C. annua L. Aschers. Ind. Sem. Hort. Berol, 13 ; Muschler Fl. Egypt, I, 417.

Zor Hills. No. 30.

Local name.—" Khishshain " (خشّين). Muschler calls it " qinebra " or " geleyqela ".

Distrib.—Persia to Asia Minor and parts of the Mediterranean region.

A small plant about 6 inches in height with small white flowers. Camels and other animals graze freely on it but men have no use for it. It grows everywhere except in swamps.

28. **Savignya** DC.

33. Savignya aegyptiaca DC. Syst. II, 283 ; Fl. Or. I, 397.

S. parviflora (Del.) Webb Fragm. aeg. (1854), 47 ; Mrschler Fl Egy. I, 417.

Zor Hills. No. 13.

Local name.—" Gulgulân " or " gulaijalân " (كلكلان or كليجلان). Muschler gives its name as " reshad gebely ".

Distrib.—Central and Eastern Persia, Arabia to the Suez and Lower Egypt.

It grows to the height of about 15 inches. This plant loves the pebbly plots of land known to the Bedouins as "hazam" (حَزَم) or "hazum" (حَزُوم) but it also grows in sand. The flowers are small and pink. The distinctive characteristics of the plant are the flat oval green seeds growing side by side and far more numerous than the flowers. The light feathery nature of the stalk and branches is another distinctive feature. Men do not eat this plant, but camels are very fond of it and it is very good for them. An ancient Sulabi leech of some note, living at the time of Bani Hallal, one Rāshid-ul-Khalāwi (راشد الخلاوي) made up the following doggerel lines about this plant which every Bedouin knows :—

إلى طار حب الگليجلان و قور جن

فروخ القطا الثم شمل القبائل

Ali tar hubb ul gulaijalan o dur jun
Fooruq ul kat ul tam shamal ul kabbayal

Roughly translated it means "when the seeds of 'gulaijalan' fly and the young of the sand-grouse run along the ground (*i.e.* when the hot weather has set in), there is *gathering together of the tribes* (*because they can no longer wander about* independently in the desert, but must gather near the wells)".

29. Diplotaxis DC.

34. Diplotaxis sp.
Zor Hills. No. 29.

Local name.—"Khafsh" (خفش).

A plant about 2 feet high. It resembles the mustard and bears yellow flowers. The leaves and seeds are hot to the taste. Camels are very fond of it and it is said to increase their milk. Other animals also graze on it freely, but men have no use for it. It grows everywhere except in swamps and is very common.

30. Notoceras Br.

35. Notoceras canariense R. Br. in Ait. Hort. Kew ed. II, iv, 117; Fl. Or. I, 314; F. B. I. I, 140.

N. bicorne (R. Br.) Caruel Flor. Toscan. (1860), 536; Muschler, Fl. Egy. I, 403.

Zor Hills. No. 76.

No local name.

Distrib.—From the Punjab to N. Africa, Southern Spain and the Canary Islands.

A plant resembling "hasār" (حسار), another cruciferous plant, with which it grows on sandy plains in close company (see No. 41).

31. Malcolmia Br.

36. **Malcolmia torulosa** Boiss. Fl. Or. I, 225; F. B. I. I, 146.
Zor Hills, No. 60.

Local name.—"Haraf" (حَرَف).

Distrib.—From West Persia to Syria and North Africa. In India found in the Punjab.

A small plant not unlike "khafsh" (see No. 34) in general appearance and manner of growth. It has small white flowers, height about 6 inches, and is fairly common.

32. Leptaleum DC.

37. **Leptaleum filifolius** DC.—Syst. II, 511; Fl. Or. I, 243.
L. pygmaeum DC. Syst. II, 511.
Zor Hills. No. 69.
No local name.—Muschler calls it "qeseysa".

Distrib.—Southern and Eastern Persia to Syria and Trans-Caucasia, Turkestan and the Eastern Mediterranean region. De Candolle also records it of Siberia.

This plant is not common in Koweit and the Bedouins do not know of any use for it.

33. Matthiola Br.

38. **Matthiola oxyceras** DC. Syst. II, 173; Fl. Or. I, 155.
Zor Hills. No. 2.

Local name.—"Shigāra" (شقارة). Muschler gives the name "shegāra" to *Matthiola humilis* DC. while *M. oxyceras* he calls "manthûr." It has, however, to be noted that the same name of "manthûr" is applied by him to *M. incana* R. Br. as also to *Cheiranthus Chieri* L. and *Nasturtium palustre* DC.

Distrib.—From Southern Persia to Asiatic Turkey and Trans-Caucasia, Arabia, Egypt and Cyprus.

The plant grows to about 12 inches in height. The corolla has 4 inch long wrinkled petals, is very variable in colour from dark mauve to pink and even white, but the dark coloured blossoms have generally a white centre with the colour darkening to the tips. From one to six stems may spring from a single root. The species is very common except in swamps and would be a handsome addition to garden cultivation. Camels, the milk of which it flavours, are fond of it. No other use is known for it. This species is reported as an escape on cultivated lands in Syria and Damascus.

34. Chorispora. DC.

39. Chorispora syriaca. Boiss. Ann. Sc. Nat. 1842, 384 ; Fl. Or. I, 143.

Zor Hills. No. 59.

Local name.—" Yahak " (يهق).

Distrib.—Asia Minor.

A plant with mauve flowers strongly sweet-scented. It grows in sand and camels graze on it. Bedouins do not generally recognise the plant. It is more common near Basra and was first noticed at Satra.

40. Cruciferæ. Sp ?

Zor Hills. No. 21.

Local name.—" Ḥaraisha " (حريشة).

It is a plant resembling " rai " (*Brassica juncea* H. F. and T.). In this locality it seldom grows to over 2 feet but in favourable localities, such as the Batin, it reaches to about 3 feet. The flowers are yellow. The leaves are broad and hairy, lying flat on the ground and radiating from a central root. Men do not use it but camels are very fond of it and it is said to be good for them. It is very common and is indeed the staple food of the camels during the " Ayyām-ur-Rabia " after " hamz " (gram) and " arfaj " (*Centaurea sp.*) (حمض and عرفج).

41. Cruciferæ. Not identifiable.

Zor Hills. No. 45.

Local name.—" Hasār " (حسار).

A bushy plant with tiny white flowers which somewhat resemble those of *Notoceras* but its leaves and habit are quite different.

X—RESEDACEÆ.

35. Reseda Linn.

42. Reseda Aucheri Boiss. Diagn. Ser. I, 1, 5 ; Fl. Or. I, 434 ; F.B.I. I, 181.

Zor Hills. No. 5.

Local name.—" Thinibān " (ذنبان).

Distrib.—East Persia to Asia Minor. In India it occurs only in Sind where Stocks found it.

This plant reaches its full height at about 8 inches and the flowers seem to have a faint resemblance to the English mignonette. Its habit is also very similar and though no scent has been detected there is a report that the flowers when fresh are sweet scented. It is found in stony soil, sand hills, sandy plains and rocks but never in swamps. Animals graze on it freely but men have no use for it.

XI—ROSACEÆ.

36. Neurada Linn.

***43. Neurada procumbens** Linn. Sp. Pl. 441 ; Fl. Or. II, 735 ; F. B. I. II, 368.

Zor Hills. No. 44.

Local name.—" S'adān " (سعدان). Muschler also gives this name.

Distrib.—From Sind and the Punjab to North Africa and Afghanistan.

A curious little plant, whitish grey in colour and spreading along the ground. It bears a thorny fruit round, flat, and hard which is eaten by men when young and fresh. Animals graze on it freely. The spreading arms of the plant sometimes run to 18 inches along the ground. The seed germinates on the fruit which remains as a collar around the top of the root of the mature plant.

XII—LEGUMINOSÆ.

SUB FAMILY I. MIMOSOIDEÆ.

37. Acacia Linn.

***44. Acacia Seyal** Del. Fl. Aeg. 286, t. 52 f. 2 ; Fl. Or. II, 636.

Without locality or number.

Local name.—" Talh " (طلح). Muschler states that the name " talh " is generally given to *Acacia Seyal* and occasionally to the closely allied species of A. *tortilis* Hayne which is often confused with it.

Distrib.—Arabia, Upper Egypt and N. Africa.

This tree is prized for the good quality of gum arabic that it yields which is a valuable article of export.

45. Acacia Farnesiana Willd. Sp. Pl. IV, 1083 ; Fl. Or. II, 637 ; F. B. I. II, 292.

Without locality or number.

Local name.—" Karat " (قرظ). Sir Percy Cox gives this name to another species of *Acacia* (see No. 47.)

Distrib.—Cosmopolitan throughout the tropics.

Boissier records it of Syria, Babylon and Egypt where probably it had originally been cultivated but has become naturalised to such an extent as to appear native.

46. Acacia Jacquemontii Bth. in Hook Lond. Journ. Bot. I, 499 ; F. B. I. II, 293.

Without locality or number.

Local name.—" Babul " (ببّول)

Distrib.—Arabia and Afghanistan. In India it is found only in Upper India.

Boissier does not record *A. Jacquemontii* but quotes *A. eburnea* which has generally the same habit, differing chiefly in the pod.

47. **Acacia** sp.

Oman. Without number.

Local name.—Arab. " ghaf " (غاف) ; Pers. " karat " (كَرَت). Muschler gives " qarad " (pods) as the name for *Acacia arabica* Willd var. *nilotica* Forsh.

Sir Percy Cox suggests that it may be *Acacia arabica* Willd. but Boissier does not mention the occurrence of this species in West Asia. It has, however, been found in Egypt, Abyssinia and Nubia.

48. **Acacia** sp.

Oman. Without number.

Local name.—Arab. " samr " (صَمُر) Pers. " babul " (ببّول). Sir Percy Cox calls it *Acacia vera* Willd. which is a synonym for *Acacia arabica* Willd. Muschler, however, identifies " samr " or " sammur " with *A. spirocarpa* Hochst which is indigenous to Arabia Petrææ.

SUB FAMILY II. CÆSALPINIOIDEÆ.

38. Cassia Linn.

49. **Cassia obovata** Collad. Hist. Cass. 92, t. 15 ; Fl. Or. II, 631 ; F. B. I. II, 264.

Oman. Without number. No local name.

Distrib.—Persia to North Africa and Beluchistan. In India it is found in the Punjab, Sindh and South India.

In India it is sometimes called country Senna and is occasionally to be seen in the bazars.

SUB FAMILY III. PAPILIONATÆ.

39. Trigonella Linn.

50. **Trigonella polycerata** L. Sp. Pl. 777 ; F. B. I. II, 87.

T. brahuica Boiss. Fl. Or. II, 73.

Zor Hills. No. 66.

Local name.—" Nifal " (نفل). Muschler gives this name (" nifl ") to *T. maritima* Del.

Distrib.—Western Asia, Southern Europe and Siberia. In India it is found in the Punjab and the Upper Gangetic Plain.

A handsome little vetch-like plant about 8 inches in height with yellow flowers. It somewhat resembles " umm ukhwaitim " (see No. 53), but is easily recognised by the Bedouins.

51. ? **Trigonella media** Del. Fl. Aeg. Illstr. 71 ; Fl. Or. Supp. p. 162. Zor Hills. No. 58.

Local name.—" Handakūk " (حندقوق) and " umm a'ayainah " (أم أعيينه). Muschler corroborates the former name but records it as known only from Egypt. Sir Percy Cox observes that he has no confidence in either name.

Distrib.—Egypt.

A handsome little yellow vetch. It grows upright on a slender stalk to a height of 6 inches. Though not rare, most Bedouins deny any knowledge of this plant.

40. Medicago Linn.

52. **Medicago laciniata** All. Ped. I, 316 ; Fl. Or. II, 104 ; F. B. I. II, 90.

Without locality or number.

Local name.—" Nafal " and " kataifi." Muschler quotes the vernacular name of " nefl " for several species of *Medicago*.

Distrib.—From the Punjab to the Mediterranean region and North Africa.

53. **Medicago** sp.

Zor Hills. No. 34.

Local name.—" Umm ukhwaitim " (أم أخويتم). Mother of Rings.

A white flowering vetch, the fruits of which are said to resemble rings, whence the name. It is eaten by many animals but men have no use for it. It grows on th plains, hills and sand hills and is fairly common.

41. Alhagi Desv.

*54. **Alhagi maurorum** Desv. Journ. I, 120, t. 4 ; Fl. Or. II, 558 F. B. I. II, 145.

Without locality or number.

Local name.—Arab. "agul" (عاقول); Pers. "khār-i-shutur" (خار شتر).

To the English it is generally known as the "Camel Thorn". Boissier gives "aqual" and "hadz" as the Arabic names for this plant while Muschler gives only "aqual." These names are also found in Watt's D. E. P.

Distrib.—Southern Persia to Egypt. In India found in the north-western and Upper Gangetic plains, also in the Concan.

A valuable fodder for camels. Its manna is a well known article of export.

42. Cicer Linn.

*55. **Cicer arietinum** Linn. Sp. Pl. 738; Fl. Or. II, 560; F. B. I. II, 176.

Without locality or number.

Local name.—Arab. "hamas" (حمص) or "nakhi" (نخي); Pers. "nakhūd" (نخود); English "gram". According to Muschler the name "hommus" is applied to the seeds only while the plant is known as "melaneh".

Distrib.—Western Asia, the Mediterranean region, North Africa, Afghanistan but commonly met with in a state of cultivation.

43. Vicia Linn.

*56. **Vicia** sp.

Without locality or number.

Local name.—"Bāqla" (باقلا). Sir Percy Cox calls it the "Broad Bean" which is *Vicia Faba* L. In India the name "bakla" is generally given to *Vicia Faba* L. though Forskål applies to *Vicia lutea* the name of "bakhra".

Distrib.—Cultivated everywhere.

44. Phaseolus Linn.

This genus is not included by Boissier or Muschler. The following species are probably recent introductions.

*57. **Phaseolus mungo** L. Mant. I. 101; F. B. I. II, 203; Prain's Bengal plants, I, 387.

Without locality or number.

Local name.—Arab. "Māsh" (ماش); Pers. "mashaq" (ماشک)

The above two names have probably been transposed; "māsh" is the common Persian name for this plant. Sir Percy Cox calls it the "Black Vetch." In India the name "māsh" is uniformly applied to *Phaseolus mungo* L. (the black seeded kind).

Distrib.—Throughout the Eastern Tropics.

*58. **Phaseolus vulgaris** Linn. Sp. Pl. 723; F. B. I. II, 200.

Without locality or number.

Local name.—Arab. "lubi"; Pers. "lubia" (P. لوبیا; A. لوبي). Sir Percy Cox calls it the "Kidney Bean"; but according to Muschler the name "lubia" is generally given to *Dolichos Lablab* L.

Distrib.—Cosmopolitan. Known only in cultivation.

*59 **Phaseolus multiflorus** Willd. Sp. Pl. III, 1030; F. B. I. II, 200.

Without locality or number

Local name.—Arab. "lubi ahmur" (لوبي احمر); Pers. "lubia kirmiz" (لوبیا قرمز) the red "lubia". Sir Percy Cox calls it the Scarlet Runner.

45. **Dolichos** Linn.

*60. **Dolichos Lablab** L. Sp. Pl. 725; F. B. I. II, 209.

Boissier does not mention this genus in the text of his Flora Orientalis but in the Appendix quotes "liblab" as the Arabic name for the plant. Muschler quotes both "lubia" and "liblab"

Without locality or number.

Local name.—"Lubia" (see remarks above). In India it is very common and is cultivated in a large number of forms.

Distrib.—Throughout the tropics in the old world.

XIII—GERANIACEÆ.

46. **Erodium** L' Herit.

61. **Erodium cicutarium** L' Hér. Géraniol. 5, No. 12; Fl. Or. I, 890; F. B. I. I, 434.

Zor Hills. Nos. 17, 19 and 42.

Local name.—"Ragam" "garsh" and "bisbās" (بِسباس - قَرش - رَقم).

Distrib.—From Persia to N. Africa and throughout the temperate parts of N. Asia and of Europe. Very common on the coasts of Great Britain. In India it is found in the North-Western India from Sind to the Punjab. *Elsewhere introduced.*

A low spreading herb growing from 6 to 8 inches with deep cut leaves somewhat like parsley and a thin pink root running deep into the soil. It is very common on "huz-nm" lands and low hills. Both men and animals eat the plant, particularly the Arabs who eat it raw. The long pointed fruits are characteristic.

VIV—ZYGOPHYLLACEÆ.

47. Fagonia Tourn.

62. Fagonia Bruguieri DC. Prod. I, 704; Fl. Or. I, 905; F. B. I. I, 425.

Zor Hills. No. 23.

Local name.—"Jambah" (جنبه) or "shacha'ah (شجعه)".

Distrib.—Southern Persia to Asia Minor and Westward to Algeria. N. W. India.

A thorny plant spreading along the ground and covering it like a carpet, sometimes enclosing a space of 18 inches in diameter. It has tiny pink flowers. Camels will feed on it when hungry but not readily. It is of no use to men.

48. Tribulus Linn.

***63. Tribulus terrestris** L. Sp. Pl. 387; Fl. Or. I, 902; F. B. I. I, 423.

Thaffir and Agnian country. Without number.

Local name.—"Gathā" (قثا). Muschler gives this name both to *T. terrestris* L. and *T. alatus* Del.

Distrib.—Throughout the warm regions of the globe.

This plant was not found in Koweit, but in the localities mentioned above. It reaches about 10 ft. in length, trailing along the ground and is one of the commonest plants in the swamps. Camels graze on it occasionally. In India the fruits and seeds are deemed to be of medicinal value.

XV—EUPHORBIACE E.

49. Euphorbia Linn.

64. Euphorbia Emodi Hook. f. F. B. I. V, 250.

Zor Hills. No. 28.

Local name.—"Ghazālah" (غزاله) also called "khannaiz" (خنيز)

Distrib.—Afghanistan. N. W. India.

It is a tiny shrub growing not higher than 2 to 4 inches. It bears small white flowers and fruits that are said to act as a violent purgative. It is fairly common in the locality.

65. **Euphorbia dracunculoides** Lam. Encyc. II, 428; Fl. Or. IV, 1110; F. B. I. V, 262.

Zor Hills. No. 71.

Local name.—" Khamsān " (خمسان); it is also occasionally called " ghazāla " (see above No. 64).

Distrib.—Arabia and Tropical North-Africa. In India it is found in the plains and low hills from the Punjab to Behar and southwards to Concan and the Coromandel.

A small plant growing to about 12 inches in height and bearing small angular fruits of the size of peas. These act as a violent purgative.

XVI—RHAMNACEÆ.

50. Zizyphus Linn.

66. **Zizyphus Spina-Christi** Willd. Sp. Pl. I, 1105; Fl. Or. II, 13; F. B. I. I, 637.

Zor Hills and elsewhere; without number.

Local name.—Arab " sidr " or " sadr " (سدر). The fruits are called " nebek " or " nabq " (نبق); Persian " kunar " (كنار). Boissier and Muschler quote both the Arabic names.

Distrib.—Persia to Asia Minor and Egypt. Also Afghanistan. Bēluchistan and North-West India where it is cultivated.

Aga Kazim Shirazi of the Board of Examiners, Calcutta, has given the following note about the " sadr ".:—

" Sidrat-ul-Muntaha " (سدرةالمنتهى), *lit.* the " Lote tree of the extremity ". A tree in the seventh heaven, having its roots in the sixth. It is situated on the right-hand side of عرش " 'arsh " (Throne of God) and is the seat of angel Gabriel. This tree is mentioned twice in the Qur'ān, Sūrah LIII, 8-18. Its fruits were like water-pots, and its leaves like elephant's ears (Mishkāt).

The " sidr " tree is called " ber " in India. A decoction of its leaves is used by Muslims to wash the dead, on account of the sacredness of the tree.

XVII—MALVACEÆ.

51. Malva Linn.

67. **Malva verticellata** L. Sp. Pl. 689; F. B. I. I, 320.

Without locality or number.

23 JUN

Distrib.—Throughout Western Asia and Europe. It occurs in Upper India and is much cultivated as a vegetable in Assam.

68. ? **Malva** sp.

Zor Hills. No. 46.

Local name.—"Khubbaiz" (خبيز) applied to the raw plant, and "tūlah" (تُولَه) applied to the cooked plant. Muschler gives "khubbaiz" as the name of *Malva parviflora* L.

This common weed, resembling a mallow with pink flowers, grows up to a height of 12 inches. The specimen was from Basra, but on every dung heap round Koweit, after a little rain, the plant at once sprouts thickly growing where no other weed or grass will grow.

Animals graze on it freely and the Persians are very fond of the cooked leaves.

69. **Malvaceæ** ?—Indeterminable.

Zor Hills. No. 39.

Local name.—"Garnah" (قَرنَه). The name "garniya" is given by Muschler to *Pelargonium zonale* Willd. which is abundant in the Levantine region.

This plant grows chiefly on "hazum" land to about 6 inches in height and the leaves grow out in a rosette from a fusiform root that runs deep into the soil. The root is red and is largely used for tanning hides and skins. The process generally adopted is as follows:—The roots are boiled in water and the skins are placed in the water before it cools, and are left for 2 or 3 days. The process takes away the evil smell of the hide, softens and strengthens it and gives it a red colour. The plant is eaten by grazing animals.

XVIII—TAMARICACEÆ.

52. Tamarix Linn.

70. **Tamarix articulata** Vahl. Symb. Bot. II, 48 t. 32; Fl. Or. I, 777; F. B. I. I, 249.

Bushire. Without number.

Local name.—Arab. "tarfā" (طرفا); Pers. "gaz" (گز). Muschler calls this species by the name of "athl" which according to our specimen belongs to the following species.

Distrib.—From Beluchistan to Egypt and S. Africa. In India it is abundant in the Punjab and in Sind.

71. **Tamarix macrocarpa** Bunge. Tent. Gen. Tamaric. (1852) 79; Fl. Or. I, 779.

Koweit. Without number.

Local name.—Arab. "ithl" (اثل). Pers. "gaz" (گز) See above No. 70.

Distrib.—From Persia to Arabia and Egypt.

Said to be a common species of *Tamarix* in this locality. Sir Percy Cox calls it the dwarf tamarisk, and says that it grows by the seaside. He associates it with *T. indica* Willd.

*72. **Tamarix** sp.?

Zor Hills; without number.

Local name.—Arab. "tarfā" (طرفا) Pers. "gaz" (گز). Muschler assigns the name "tarfā" to *T. tetragyna* Ehrenb. which according to Boissier occurs in Arabia, Mesopotamia and Egypt.

The commonest species in the Zor Hills.

XIX—CISTACEÆ.

53. Helianthemum Pers.

73. **Helianthemum salicifolium** L. Mill. Gard. Dict. ed. VIII, 21; Fl. Or. I, 441.

Zor Hills. No. 64.

Local name.—"Jarraid" (جرّيد).

Distrib.—Persia to Asia Minor, the Mediterranean region and Central Europe.

This is not a common plant but is apparently somewhat prized by the Bedouins. Its uses, however, are not generally known.

74. **Helianthemum Lippii** Pers. Syn. II, 78; Fl. Or. I, 443.

Zor Hills. No. 35.

Local name.—"Ragrōg", (رقروق). Muschler gives it the name of "ralah" or "ra'al".

Distrib.—Persia to Asia Minor and Egypt. A variety of this species was discovered by Stocks in Beluchistan.

It is a small plant with a woody stock, small yellow flowers, and fruits of the size of a pepper corn which at first are reddish yellow but dry into a neutral whitish tinge. It grows in mud plots between sand hills. All kinds of grazing animals feed on it. It is believed that the land where it grows is sure to produce large quantities of the edible fungi called "fukaiah," (فقعه) which the English at Basrah eat as truffles.

XX—PRIMULACEÆ.

54. Anagallis Linn.

75. **Anagallis arvensis** L. Sp. Pl. 148; Fl. Or. IV, 6; F. B. I. III, 506.

Zor Hills. No. 68.

Distrib.—Cosmopolitan. Two forms occur—one with scarlet flowers (*A. phœnicea* Scop, the Scarlet Pimpernel) and the other with sky blue flowers mentioned above (*A. cærulea* Lam.)

Local name.—Not known.

It is a tiny plant with handsome blue flowers exceedingly common in the sea coast. It has also been observed in Basra. It is a rather conspicuous plant and is poisonous to stock.

XXI—PLUMBAGINACEÆ.

55. Statice Linn.

76. Statice suffruticosa Linn. Sp. Pl. 276; Fl. Or. IV, 867.

Without locality or number.

Local name.—" Kataf ".

Distrib.—Afghanistan, Caucasia, N. Turkestan, Southern Russia and Siberia.

XXII—APOCYNACEÆ.

56. Nerium Linn.

*77. **Nerium Oleander** Linn. Sp. Pl. 209; Fl. Or. IV, 47; F. B. I. III, 655.

Koweit; without number.

Local name.—Arab. " daflah " or " dafā " (دِفْلَى or دِفْلَة); Pers. " khar zahara " (خَرزَهرَه), the latter word meaning the " Asses' bane " which agrees with the name the Italians give to Oleander, *viz.* " Amnaya d'assino." Muschler corroborates the Arabic name while both are quoted in Watt's D. E. P.

Distrib.—Asia Minor to the Mediterranean region. In India found occasionally as a garden plant.

XXIII—ASCLEPIADACEÆ.

57. Orthanthera Wight.

78. Orthanthera viminea Wight and Arn. Contrib. 48; F. B. I., IV, 64. Not mentioned by Boissier.

Without locality, number or local names.

Distrib.—N.W. India and Beluchistan.

In Beluchistan, as in India, this plant is known as "khip." It is believed to be a good fodder for camels staving off thirst for a long time. Ropes of the fibre of this plant withstand moisture and are good for Persian wheels.

XXIV—BORAGINACEÆ.

58. Paracaryum Boiss.

79. Paracaryum microcarpum Boiss. Diagn. Ser. II, 3, 139; Fl. Or. IV, 255; F. B. I. IV, 162.
Zor Hills. No. 77.

Local name.—" Fakīkah " (فقيقة).

Distrib.—Afghanistan. In India found in Kashmir and the sub-alpine Western Himalayas.

A plant resembling " hamāt " (see under *Anchusa* No. 82) in general appearance and growth. It has tiny blue flowers and grows on sandy plains.

59. Echinospermum Swartz.

80. Echinospermum minimum Lehm. Asperif. 126; F. B. I., IV, 162; near *E. Szovitsianum* Fisch. and Mey., Fl. Or. IV, 248. Engler and Prantl place it under *Lappula.*
Zor Hills. No. 61.
Local name.—Not known.
Distrib.—Kashmir, Afghanistan and Beluchistan to the Ural and Altai Mountains.

This plant bears small white flowers. It is not quite uncommon and several plants of it were found growing in the locality where it was observed, but the Arabs, even those desert born, could not identify it nor specify its uses.

60. Anchusa Linn.

81. Anchusa hispida Forsk. Fl. Aegypt. Arab. 40; Fl. Or. IV, 158.
Zor Hills. No. 31.

Local name.— " Chahīl " (چحيل) (*cf.* No. 83.) Muschler gives it the name " qir'i."
Distrib.—From Persia to Asia Minor, Western Arabia, Egypt and North Africa; also found in Afghanistan and Beluchistan.

It is a plant spreading along the ground, with tiny flowers which are seldom more than 2 to 3 inches from the ground. The colour of the flower varies from pink and blue to white on the same plant. The leaves are very hairy but camels and sheep graze on it freely. It does not appear to be of any use to men.

82. Anchusa sp.
Zor Hills. No. 73.

Local name.—" Hamāt" (حمّاط)

A hairy spreading plant with leaves lying very flat on the sand and radiating from one central root that runs deep into the soil. The flowers are pink. It is fairly common and is invariably found on sand hills. Animals graze on it but men have no use for it.

61. **Nonnea** Medic. (**Nonea** Moench.)

83. Nonnea picta Sweet. Hort. Brit. ed. I, 292 ; Fl. Or IV, 166.
Zor Hills. No. 9.

Local name.—" Chahal " (چحل). This vernacular name differs little from that applied to *Anchusa hispida* Forsk. (*cf.* No. 81).

Distrib.—From Persia westward to Armenia, Trans-Caucasia, Eastern and Southern Russia. Also in Afghanistan and Beluchistan.

The plant, at its full height, reaches to about one foot. It grows in clumps and has small yellow flowers. It is found everywhere except in swamps. Camels graze on it readily but men have no use for it.

XXV—LABIATÆ.

62. **Teucrium** Tournef.

84. Teucrium sinaicum Boiss. Diagn. Ser. I, 12, 91 ; Fl. Or. IV, 822.
Zor Hills. No. 41.

Local name.—" J'adah " (جعدة). Boissier gives this name (" jaada") but Muschler gives the same name (" jaade ") to *Ajuga Iva* Schrb., an allied Egyptian plant.

Distrib.—Known chiefly in Arabia Petraea.

A bush about the size of the " arafij " (see under *Centaurea* No. 98), growing to 2 feet high. It bears a white flower. The leaves are greyish white and give forth, when crushed, a characteristic scent. The growth is peculiar. Long roots work out from a central root and each branch root carries innumerable stalks of the plant. It is generally found in the sandy torrent beds as they work down to the sea and is especially common round Sabr'a. All grazing animals except horses and donkeys feed on it. Both Bedouins and townsmen use the leaves boiled up with limes as a cooling draught in fever. Bedouins also dry the leaves and smoke them as tobacco.

XXVI—SCROPHULARIACEÆ.

63. **Scrophularia** Linn.

85. Scrophularia lucida Linn. Syst. ed. X, 1114 ; Fl. Or. IV, 403 ; F. B. I. IV, 256
Zor Hills, without number or local name.

Distrib.—Asia Minor to Italy. W. Himalayas.

This small shrub has a long spreading root that goes deep into the soil.

XXVII—PLANTAGINACEÆ.

64a Plantago Linn.

86. Plantago Loeflingii Linn. Sp. Pl., 115; Fl. Or. IV, 883.
Zor Hills. No. 50.

Local name.—" Asab'i ul'urūs " (أصابع العروس) which means " bridegroom's fingers ".

Distrib.—From Persia westward to Asia Minor and Greece, North Africa and the interior of Spain.

It is easily distinguished from the following species of *Plantago* (see below) in having the club-shaped seeds longer than in those two. The leaves are curiously toothed or spiked. The seeds are eaten by the Arabs like those of *P. ovata* Forsk. The plant is not common.

87. Plantago ovata Forsk. Fl. Aegypt. Arab. 31; Fl. Or. IV, 885; F.B.I. IV, 707.
Zor Hills. No. 79.

Local name.—" Braihō " (بريهو). In India it is generally known under the name of "Ispaghul" (اسپغول), a word said to be derived from Pers. "asp" (اسپ) a "horse" and Arab. "ghol" (غول) an "ear" in allusion to shape of the leaves.

Distrib.—From Persia to Spain and the Canaries. In India in the Punjab and in the low hills westwards from the Sutlej.

This plant closely resembles the above species but its flower-heads are shorter and rounder while its leaves are very thin like hairs and entire. The seeds are used by the Arabs as a laxative. They are demulcent and are official in the British Pharmacopœia (1914) under the name of " Ispaghula ". They are often called " Spogel " seeds.

88. Plantago Coronopus Linn. Sp. Pl. 115; Fl. Or. IV, 888.
Zor Hills. No. 10.

Local name.—" Riblah " (ربلة).

Distrib.—From Persia westward to Asia Minor, the Mediterranean region and Egypt, also Afghanistan. Common in England especially by the sea and known as " Stag's Horn Plantain ".

A grasslike plant that never grows to over 4 inches in height. It is found everywhere except in swamps and is eaten by the Arabs. All grazing animals feed on it.

XXVIII—RUBIACEÆ.

65. Randia Linn.

89. Randia sp.
Koweit. Without number or notes.

XXIX—DIPSACEÆ.

66. Scabiosa Linn.

90. *Scabiosa rotata* Bieb. Fl. Taur. Cauc: III, 102; Fl. Or. III, 145.
Zor Hills. No. 11.

Local name.—"Tarbah" (تربهه). This vernacular name is stated to be very doubtful as the plant recognised as true "tarbah" has been identified as *Silene conica* L. (see No. 28).

Distrib.—Southern Persia and Caucasia.

It is a sand-hill plant growing about 8 inches in height and bears large white flower-heads, somewhat sweet scented. Several specimens of it were found near the Zor Hills but the plant does not appear to be common. It is of no known use.

XXX—COMPOSITÆ

67. Ifloga Cass.

91. Ifloga spicata Sch. Bip. Webb. and Berth. Phyt. Canar. II, 310; Fl. Or. III, 248.
I. Fontanesii Cass. Dict. Sc. Nat. XXIII, 14; F. B. I. III, 277.
I. cauliflora Clarke Comp. Ind. 99.
Zor Hills. No. 63.

Local name.—"Hasach" (حسج).

Distrib.—From Persia westward to the Canary Islands, Afghanistan, Beluchistan and N. W. India.

A plant growing to barely 4 inches with a simple stem and narrow leaves growing horizontally. Grazing animals feed on it.

68. Filago Linn.

92. Filago germanica L. Sp. Pl. II, 1311; Fl. Or. III, 246; F. B. I. III, 277.
Zor Hills. No. 70.

Local name—"Kattain" (قطين). *Muschler calls it "kurbat."

* Arabic قطن cotton. The plant is covered with cottony hairs. Compare the latin name "Filago" from "filum" a thread.

Distrib.—From Persia westward to the Canaries. Found in India in the plains and hills of the N. W. India. Common in England and known as "Cudweed."

This species grows in sandy soils and is common round Gishániya but has not been observed further south. It is easily confounded with another plant called "saadān," "s'adān" *Neurada procumbens* L. (No. 43).

69. Pulicaria Gaertn.

93. Pulicaria gnaphalodes Boiss. Diagn. Ser. I, VI, 76; Fl. Or. III, 203; F. B. I. III, 299.

Without locality or number.

Local name.—"Nafeej".

Distrib.—Persia, Turkistan and Afghanistan.

70. Anthemis Linn.

94. Anthemis odontostephana Boiss. Diagn. Ser. I, VI, 85; *Fl. Or* III, 319; F. B. I. III, 312.

Zor Hills, No. 37.

Local name.—"Chahwiyān." (چحویان).

Distrib.—Persia, Afghanistan and Beluchistan. In India found in Sind and the Punjab.

It resembles the ox-eyed daisy very closely. It is common especially in the sand hills but grows everywhere out of the swamps. Grazing animals feed on it but not very freely. Men make no use of it.

71. Matricaria Linn.

95. Matricaria sp.

Zor Hills. No. 7.

Local name.—"Gargās" or "Garais" (قرقاص or قریص).

This plant never grows above 6 inches in height and occurs both singly and in clumps. It is very common everywhere and men use it for seasoning and eat it by itself for its hot taste. The principal use of "gargas", however, is in the manufacture of "igt" (اقط) the curious brick cheese of the Bedouins which is an article of sale in the Koweit bazar. This product is a provision for the hot weather and the Bedouins use it both dry and moistened with water and pounded with dates. To make "igt" the flowers of "gargās" are dried and boiled into a cheesy consistency with "liban" which, according to the Bedouin dialect around Koweit, means butter milk.

72. Senecio Linn.

96. Senecio coronopifolius Desf. *Fl. Atlant. II, 273; Fl. Or.* III, 390; F. B. I. III, 341.

Zor Hills. No. 25.

Local name.—"Zimloog" (زملوق).

Distrib.—From Persia westward to Asia Minor and the Mediterranean region. In India it is found in the Western Himalayas.

A small plant with yellow flowers like a daisy and in some respects resembling *Anthemis*, No. 94. It grows to about 10 inches and is especially common on the sand hills near Ras Ijlafa.

73. Calendula Linn.

97. Calendula arvensis Linn. Sp. Pl. ed. II, 1303; Fl. Or. III, 418; F. B. I. III, 358.

Zor Hills. No. 6.

Local name.—"Hanwa" (حنوة).

Distrib.—From Persia westward, also in Caucasia, Central and Southern Europe and North Africa.

This plant is not more than 8 inches in height and the flowers resemble a small marigold, some having a black and others an orange centre. In habit the species may be either prostrate or erect. It grows everywhere except in the swamps and camels feed on it, but the Bedouins believe that it is fatal to camels to eat much of this plant.

74. Centaurea Linn.

98. Centaurea Sp.

Without locality or number.

Local name.—"Arafij" (عرفج) or "arfaj".

75. Koelpinia Linn.

99. Koelpinia linearis Pall. Itin. III, App. 755; Fl. Or. III, 721; F. B. I. III, 392.

Zor Hills. No. 12.

Local name.—"Th'ilūg" or "Lahyat ultais" (لحية التيس) or ذعلوق which means "nanny goat's beard".

Distrib.—Western and Central Asia, South Russia and North Africa. In India found in the Punjab and in Kashmir.

A spreading plant not more than 6 inches high with a handsome yellow flower like a minute dandelion and with curiously characteristic fruits like birds' claws. The leaves are thin and almost hair-like and the flowers and fruits grow side by side. It grows chiefly on sandy plains. The Bedouins are fond of the plant, eating all but the root. All grazing animals feed on it.

76. Launea Cass.

100. Launea nudicaulis Hook. f. F. B. I. III, 416.
Zollikoferia nudicaulis Boiss. Fl. Or. III, 824.
Zor Hills. No. 48.

Local name.—" Hūa " (هوا)

Distrib.—From Arabia and Egypt to the Atlantic Coast; also in India and Afghanistan.

It is the plant known as " Eve's Dandelion." It has a flowering stem growing to about 12 inches in height and is very common. It is eaten by Bedouins and also by townsmen. All grazing anima's devour it freely.

101. Compositae Sp. ?
Without locality or number.
Local name.—" Hamra ".

ADDENDUM.

Names not included in the systematic list for want of specimens or of sufficient materials for identification :—

'Al'awaihirrah	Zor Hills	No. 62
'Algah	,,	,, 38
'Ansil	,,	,, 8
'As'ansal	,,	,, 72
Athid	,,	,, 1
Gafa'ah	,,	,, 32
Ghākah	,,	,, 80
Hambaizan	,,	,, 3
Hauthān	,,	,, 15
Harāsa	,,	,, 4
Imrār	,,	,, 52
Irjah	,,	,, 76
Khafūr	,,	,, 57
Khathrāth	,,	,, 49
Mirār	,,	,, 22
Rakaijah	,,	,, 51
Saham	,,	,, 36
Sam'aah	,,	,, 67
Sawaichah	,,	,, 33
Sh'iairah	,,	,, 54
Suffār	,,	,, 14
Without name	,,	,, 55
Do.	,,	,, 78

INDEX.

PAGE.

A

Abun nom 184
Acacia arabica *Willd.* . . . 190
,, eburnea 190
,, Farnesiana *Willd.* . . 189
,, Jacquemontii *Bth.* . . 189
,, Seyal *Del.* 189
,, sp. 190
,, spirocarpa *Hochs* . . 190
,, tortilis *Hayne* . . . 189
,, vera *Willd.* . . . 190
Agaricaceæ 175
Agul 192
Ajuga Iva *Schrb.* 200
'Al'awaihirrah 206
'Algah 206
Alhagi maurorum *Desv.* . . 191
Amnaya d'assino 198
Anagallis arvensis *Linn.* . . . 197
,, caerulea *Lam.* . . . 198
,, Phænicea *Scop.* . . 198
Ânaisalān 179
Anchusa hispida *Forsk.* . . . 199
,, sp. 199
Andropogon Sorghum *Brot.* . . 176
'Ansil 206
Anthemis odontostephana *Boiss* . 203
Aqual 192
Arād 183
Arafij 200, 204
Arfaj 188, 204
'Arsh 195
Aristida caloptila *Jaub.* . . . 177
,, plumosa *Linn.* . . . 177
,, sp. 177
Arta 181
Arthrocnemum glaucum Ung *Sternb.* 182
Asab'i ul' urūs 201
'As'ansal 206
Asp 201
Asphodelus clavatus *Roxb.* . . 179
,, tenuifolius *Cav.* . . 179
Asses' bane 198
Athl 196
Athid 206

PAGE.

B

Babul 190
Baqla 192
Bajra 177
Bajri 177
Bakhra 192
Bakla 192
Barley 179
Barwak 179
Basidiomycetes 175
Bed 180
Ber 195
Birds' faquaah 175
Bisbās 193
Black Vetch 193
Braihō 201
Brassica juncea *H.F.* and *T.* . . 188
Broad Bean 192
Bromus tectorum *Linn.* . . . 177
Buraq 179
Busseyl 180

C

Calendula arvensis *Linn.* . . . 204
Calligonum comosum *L'Herit* . . 181
Camel Thorn 192
Carrichtera annua *Linn.* . . . 185
,, vellæ *DC.* . . . 185
Cassia obovata *Collad.* . . . 190
Centaurea Sp. . . . 188, 200, 204
Chahal 200
Chabil 199
Chahwiyān 203
Cheiranthus Chieri *Linn.* . . 187
Chloris villosa *Pers.* . . . 178
Chorispora Syriaca *Boiss.* . . 188
Cicer arietinum *Linn.* . . . 192
Compositae Sp. ? 205
Crocus 179
Cruciferæ Sp. ? 183
Cudweed 203
Cynodon dactylon *Pers.* . . . 178

PAGE.

D

Dafla, *Daflā* 198
Daidhān 184
Dār 180
Dārsafeda *180*
Dhura 176
Diplotaxis sp. 185
Dolichos Lablab *Linn.* . . . 193
Dub 178
Dukhn 177
Durah 176
„ Kizan 176
„ shamí 176
Durba 177
Dwarf tamarisk 197

E

Echinospermum minimum *Lehm.* . 199
„ Szovitsianum *Fisch.* 199
Erodium cicutarium *Linn.* . . . 193
Erucaria uncata *Boiss.* . . . 185
Euphorbia dracunculoides *Lam.* . 195
„ Emodi *Hook.* . . . 194
Eve's Dandelion 205

F

Faga'ah 175
Fagonia Druguieri *DC.* . . . 194
Fakıkah 199
Faqaah 175
Filago germanica *Linn.* . . . 202
Fukaiah 197

G

Gafa'ah 206
Gagea reticulata (*Pall.*) *Schult.* . 179
Gandum 178
Garais 203
Gargās 203
Garnah 196
Garniya 196
Garsh 193
Gathā 194
Gaz 196
Geleyqela 185
Ghaf 190
Ghākah 206

PAGE.

Gharah 180
Ghardak 181
Ghazāla 194
Ghazalah 194
Godhūm 178
Gol 201
Gram 192
Gulaijalān 185
Gulgulān 185
Gum arabic 189

H

Hadz 192
Haloxylon recurvum *Boiss.* . . 183
„ salicornicum *Bunge* . 183
„ sp. 183
Hamas 192
Hamaz 188
Hamāt 199, 200
Hambaizan 206
Hantah 178
Hambasis 180
Hammaith 181
Hamra 205
Hamth 182, 183
Handakuk 191
Hanwa 204
Haraf 187
Haraísha 188
Haram 184
Harāsa 206
Hasach 202
Hasar 186
Hauthān 206
Hazam 186
Hazum 186
Helianthemum Lippii *Pers.* . . 197
„ salicifolium *Linn.* . 197
Hema 177
Hommeyd 181
Hommus 192
Hordeum vulgare *Linn.* . . . 178
Hua 205
Hussonia uncata *Boiss.* . . . 185

I

Idhra 176
Ifloga cauliflora *Clarke* . . . 202
„ Fontanesii *Cass.* . . . 202
„ spicata *Sch.* . . . 202

	Page.
Igt.	179, 203
Ilm	177
Imrār	206
Indian Corn	176
Iris Sisyrinchium *Linn*	179
Irjah	206
Isnainira	180
Ispaghul	201
Ithl	196

J

Jaada	200
Jaade	200
J'adah	200
Jambah	194
Jaraisah	184
Jarraid	197
Jau	178
Jowari	176

K

Karat	190
Kataf	198
Kataifi	191
Kattain	202
Khafsh	187
Khafūr	206
Khamsan	195
Khannaiz	194
Khār-i-shutr	192
Kharit	183
Khar zahara	198
Khathrāth	206
Kheyta	180
Khip	198
Khishshain	185
Khubbaiz	196
Kidney Bean	193
Kochia sp.	182
Kœlpinia linearis *Pall.*	204
Kunar	195
Kurbat	202

L

Lahyat ul tais	204
Lappula	199
Launea angustifolia	185
„ nudicaulis *Hook.*	205

	Page.
Leptaleum filifolius *DC.*	187
„ pygmæum *DC.*	187
Liban	203
Liblab	193
Lubi	193
Lubia	193
Lubiahmur	193
Lubia Kirmiz	193

M

Maize	176
Makar	181
Mashaq	193
Malcolmia torulosa *Boiss*	187
Malva parviflora *Linn.*	196
„ sp.	196
„ verticellata *Linn.*	194
Manthur	187
Māsh	193
Matricaria sp.	203
Matthiola humilis *DC.*	187
„ incana *R. Br.*	187
„ oxyceras *DC.*	187
Medicago laciniata *All.*	191
„ sp.	191
Melaneh	192
Mirār	206
Mother of Rings	191

N

Nabq.	195
Nafal	191
Nafeej	203
Nagil	178
Najam	178
Nakhi	192
Nakhūd	192
Nasi	177
Nasturtium palustre *DC.*	187
Nebek	195
Nefl	191
Nerium Oleander *Linn.*	198
Neurada procumbens *Linn.*	189, 203
Nifal	191
Nifl	191
Nishil	178
Nonnea picta *Sweet.*	200
Notoceras bicorne (*R. Br.*). *Carnel*	186
„ canariense *R. Br.*	186

PAGE.

Oleander 198
Onsegl 180
Orthanthera viminea *Wight* . . 198

P

Panicum miliaceum *Linn.* . . 177
Papaver hybridum *Linn.* . . 184
Paracaryum microcarpum *Boiss.* . 199
Patta 180
Pelargonium zonale *Willd.* . . 196
Pennisetum typhoideum *Rich.* . . 177
Phaseolus multiflorus *Willd.* . . 193
,, mungo *Linn* . . . 192
,, vulgaris *Linn.* . . . 193
Phellorina 178
Plantago Coronopus *Linn.* . . 201
,, Lœflingii *Linn.* . . 201
,, ovata *Forsk.* . . . 201
Polygonum afghanicum *Meissn.* . 181
Populus euphratica *Oliv.* . . 180
,, sp. 180
Pulicaria gnaphalodes *Boiss.* . . 203

Q

Qarad 190
Qeseysa. 187
Qinebra 185
Qir'i 199
Quāq 180
Quasak 177

R

Ra'al 197
Ragam 193
Ragrog 175, 197
Rai 188
Rakaijah 206
Ralah 197
Ramth 183
Randia sp. 202
Reseda Aucheri *Boiss.* . . . 188
Reshad gebely 185
Ribiah 201
Rimth 182, 183
Rumex lacerus *Balb.* . . . 180
,, pictus *Forsk.* . . . 180
,, vesicarius *Linn.* . . . 181

PAGE.

S

Saadān 203
S'adan 189, 203
Sadr 195
Safeda 180
Saham 200
Sahwi 177
Sakhbar 178
Salicornia fruticosa *Linn.* . . 182
Salix 180
Salsola fœtida *Del.* . . . 183
,, tetragona *Del.* . . . 183
,, tetrandra *Forsk.* . . . 183
Sam'aah 189
Sammur 190
Samr 190
Savignya ægyptiaca *DC.* . . 185
,, parviflora *Del.* . . 185
Sawaichah 206
Scabiosa rotata *Bieb* . . . 202
Scarlet Pimpernel 198
,, Runner 193
Schanginia baccata *Forsk.* . . 182
Scrophularia lucida *Linn.* . . 200
Senecio coronopifolius *Desf.* . . 203
Senna 199
Shacha'ah 194
Shayer 178
Shegāra 187
Sh'iairah 206
Shigāra 187
Shilwah 182
Shinan 182
Sidr 195
Sidrah 195
Sidrat-ul-Muntaha 195
Silene conica *Linn.* . . . 184, 202
,, repens *Boiss.* . . . 184
,, tenuis *Willd.* . . . 184
Silīh 185
Slih 185
Sorghum annum *Pers.* . . . 176
,, vulgare *Pers.* . . . 176
Spogel 201
Stag's Horn Plantain . . . 201
Statice suffruticosa *Linn.* . . 198
Suaeda 182
Suffār 206
Suwwād 182

PAGE.

T

Tahmah 182
Talh 189
Tamarix articulata *Vahl.* . . 196
,, Indica *Willd.* . . . 197
,, macrocarpa *Bunge.* . . 196
,, sp. 197
,, tetragyna *Ehrenb.* . . 197
Tarbah 184, 202
Tarfā 197
Tetrapogon villosus *Desf.* . . 178
Teucrium sinaicum *Boiss.* . . 200
Th'ilūg 204
Thinibān 188
Tribulus alatus *Del.* . . . 194
,, terrestris *Linn.* . . 194
Trigonella brahuica *Boiss.* . . 190
,, maritima *Del.* . . 191
,, media *Del.* . . . 191
,, polycerata *Linn.* . . 190
Triticum vulgare *Vill.* . . . 178
Tūlah 196

U

Ulm 177
Umma'ayainah 191
Umm Ukhwaitim 191

PAGE.

V

Vicia Faba *Linn.* 192
,, lutea 192
,, sp. 192

W

Wheat 178

Y

Yahak 185, 188
Yava 178

Z

Za'eytemām 179
Zambaq 180
Zea Mays *Linn.* 176
Zimloog 204
Zirī'aah 177
Zizyphus Spina-Christi *Willd.* . . 193
Zollikoferia nudicaulis *Boiss.* . . 205
Zurat 176
Zurat shirbalal 176